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10/090,861	03/05/2002	Silke Goronzy	450117-03754	5894

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EXAMINER

STORM, DONALD L

ART UNIT	PAPER NUMBER
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2654

DATE MAILED: 02/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

10/090,861

Applicant(s)

GORONZY ET AL.

Examiner

Donald L. Storm

Art Unit

2654

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 January 2006 and 30 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6,10,15-17 and 20 is/are rejected.
- 7) ☒ Claim(s) 1-5,7-9,11-14,18 and 19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Interview Record

2. The remarks concerning the telephone discussion of January 23, 2006 are substantively acceptable to the Examiner.

Response to Amendment

3. The Applicant's SUPPLEMENTAL AMENDMENT, filed January 30, 2006, was filed within one month of notification by telephone to supply a supplemental amendment that corrects the deficiencies of AMENDMENT, filed January 4, 2006.

The AMENDMENT, filed January 4, 2006, is noncompliant with 37 CFR 1.121(c)(2) because claims being amended did not indicate changes relative to the immediate prior version of the claims, which is AMENDMENT PURSUANT TO 37 C.F.R. 1.121, filed August 5, 2005. The noncompliant AMENDMENT, filed January 4, 2006, remains in the Office file of this application, but it has not been entered and it has not been considered by the Examiner.

Specification

4. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. The specification should clearly teach the following claimed subject matter: computer readable carrier.

Regarding claim 20, if the Applicant is going to maintain the terminology "carrier" (line 2), the Examiner suggests that the Applicant ensure that the definition and antecedence in the specification clearly establish the meaning of this new terminology so that the scope of the claimed invention is not uncertain. The specification, as filed, [at page 9, lines 22-25] might

describe the subject matter of this claim; however, the Examiner does not find a clear association of these features with terminology that is used anywhere in the specification. While the Applicant is not limited to the nomenclature used in the application as filed, the Applicant should consider that the use of a variety of terms for the same thing introduces confusion. If upon consideration, the Applicant determines to introduce new terminology into the disclosure, appropriate amendment of the specification should be made that relates new terminology that is introduced by amendment of the claims to original terminology. This is necessary in order to insure certainty in construing the claim language. No new matter may be added. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o).

Claim Informalities

5. Claims 1, 6, 7, 10, and 14-18 are objected to because the manner of making amendments is not in accordance with 37 CFR 1.121.

a. Regarding claim 1, the status identifier should be (Currently Amended) and the addition of the phrase “at least” (in the line beginning *approximate*) should be underlined.

b. Regarding claim 6, the status identifier should be (Currently Amended) and the change to the phrase “as a other” (in the line beginning *language*) should be indicated by underlining and strikeout (or brackets).

c. Regarding claim 7, the status identifier should be (Currently Amended) and the change to the phrase “in (particular” (in the line beginning *recognition*) should be indicated preferably by underlining and strikeout (or brackets).

d. Regarding claim 10, the status identifier should be (Currently Amended) and the change to the words “eing” and “unction” (line 2) should be indicated preferably by underlining and strikeout (or brackets).

e. Regarding claim 14, the status identifier should be (Currently Amended) and the change to the phrase “using said a starting” (line 2) should be indicated preferably by underlining and strikeout (or brackets).

f. Regarding claim 15, the status identifier should be (Currently Amended) and the change to the phrase “aid comparison” (lines 1-2) should be indicated preferably by underlining and strikeout (or brackets).

g. Regarding claim 16, the status identifier should be (Currently Amended) and the change to the phrases “aid comparison” (lines 1-2), “canonical pronunciation” (lines 2-3), and “aid pronunciation space” (line 4) should be indicated preferably by underlining and strikeout (or brackets).

h. Regarding claim 17, the status identifier should be (Currently Amended) and the change to the phrases “aid current lexicon” (lines 1-2) and “amount of data o” (line 4) should be indicated preferably by underlining and strikeout (or brackets).

i. Regarding claim 18, the status identifier should be (Currently Amended) and the change to the phrase “in (particular” (lines 2-3) should be indicated preferably by underlining and strikeout (or brackets).

6. Claim 2 is objected to under 37 CFR 1.75(a) because the meaning of the phrase “said adapting” (line 1) needs clarification. Although claim 1 recites an adapted CL or dictionary, no adapting was previously said. It may be unclear as to what element this phrase refers. To further timely prosecution and evaluate prior art, the Examiner has interpreted this phase to be -- a step of adapting--.

7. Claim 3 is objected to under 37 CFR 1.75(a) because the meaning of the phrase “said determining and/or generating” (lines 1-2) needs clarification. Although claim 1 recites a determined and/or generated set of rules, no determining and/or generating was previously said. It

may be unclear as to what element this phrase refers. To further timely prosecution and evaluate prior art, the Examiner has interpreted this phase to refer to --a step of determining and/or generating--.

8. Claim 7 is objected to under 37 CFR 1.75(a) because it does not contain a closing parenthesis “)”. The opening parenthesis (line beginning *recognition*) needs a closing parenthesis for an artisan to determine how the parenthetical expression is complete.

9. Claim 8 is objected to under 37 CFR 1.75(a) because the meaning of the phrase “said determining and/or generating” (lines 1-2) needs clarification. Although claim 1 recites a determined and/or generated set of rules, no determining and/or generating was previously said. It may be unclear as to what element this phrase refers. To further timely prosecution and evaluate prior art, the Examiner has interpreted this phase to refer to --a step of determining and/or generating--.

10. Claim 8 is objected to under 37 CFR 1.75(a) because the meaning of the phrase “said current speaker” (line 5) needs clarification. Because two current speakers (claim 1 and claim 8) were previously recited, it may be unclear as to what element this phrase refers. To further timely prosecution and evaluate prior art, the Examiner has interpreted the occurrence of the phrase “a current speaker” in claim 8 to be --said current speaker--, referencing to claim 1.

11. Claim 10 is objected to under 37 CFR 1.75(a) because the meaning of the phrase “said property of eing” (lines 1-2) needs clarification. Because no property of eing was previously recited, it may be unclear as to what element this phrase refers. To further timely prosecution and evaluate prior art, the Examiner has interpreted this phase as --a property of eing--.

12. Claim 13, and by dependency claims 14-16, are objected to under 37 CFR 1.75(a) because the meaning of the phrase “the step of determining and/or generating” (lines 1-2) needs clarification. Although claim 1 recites a determined and/or generated set of rules, no step of determining and/or generating was previously recited. It may be unclear as to what element this phrase refers. To further timely prosecution and evaluate prior art, the Examiner has interpreted this phase to refer to --a step of determining and/or generating--.

13. Claim 14 is objected to under 37 CFR 1.75(a) because the meaning of the phrase “said a starting or canonical lexicon (SL)” (line 2) needs clarification. Because no starting or canonical lexicon (SL) was previously said, it may be unclear as to what element this phrase refers. To further timely prosecution and evaluate prior art, the Examiner has interpreted this phase to refer to --a starting or canonical lexicon (SL)--.

14. Claim 18 is objected to under 37 CFR 1.75(a) because it does not contain a closing parenthesis “)”. The opening parenthesis (line 3) needs a closing parenthesis for an artisan to determine how the parenthetical expression is complete.

15. Claim 20 is objected to under 37 CFR 1.75(a) because the meaning of the phrase “to it” (line beginning *variants*) needs clarification. Because any one of the previously recited “set”, “speaker”, “dictionary”, and “lexicon” can provide suitable antecedence for the word “it”, it may be unclear as to what element this phrase refers. To further timely prosecution and evaluate prior art, the Examiner has interpreted this phase as --to the current lexicon--.

16. Claims 4, 5, 9, 11, 12, 19 are objected to as being (directly or indirectly) dependent upon an objected base claim.

Claim Rejections - 35 USC § 112

17. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

18. Claims 6, 10, and 15-17 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Nothing in the disclosure as originally filed supports the subject matter of those claims by providing a description of the following subject matter:

- a. one source language as other tongue (claim 6, line beginning *language*);
- b. a property of eing (claim 10, lines 1-2);
- c. unction (claim 10, line 2);
- d. aid comparison (claim 15, lines 1-2);
- e. aid comparison (claim 16, lines 1-2);
- f. aid pronunciation space (claim 16, line 4);
- g. amount of data o (claim 17, line 4).

19. Claim 17 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claim is indefinite because the scope of a claim cannot be determined when the claimed features are not defined with precision and definiteness. The term “o” (line 4) should be defined in the disclosure. It should also be defined in the claims at least the first time used. No new matter may be added.

Claim Rejections - 35 USC § 101

20. Claim 20 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

21. Claim 20 is directed to computer program carrier and its program of instructions. The carrier may be an arrangement of data carrying other data, which is here arranged as instructions. Lists of instructions, that is, the description of the program, comprise only functional descriptive material.

Although computer executable and potentially operable, program instructions describe a process. The instructions are not a physical article. The instructions are not a statutory process, as it is not acts being performed, although computer-executable listings of programs are able to induce devices on which the software is encoded to perform acts. Functional data alone is not statutory because it is none of a useful process, machine, manufacture, nor composition of matter. Computer program code comprises only functional data. While the claim does recite a functional relationship to a medium ("cause a computer"), the claim does not recite any structural (and functional) relationship that could make the instructions operable to produce a concrete and tangible result. The claim does not recite any structural and functional relationship of the instructions to a statutory class of subject matter. A computer-readable medium or a processor storing computer-executable code can permit the code to operate to electrically change a general-purpose computer into a special purpose machine by activating electrical paths and deactivating other paths.

Furthermore, the carrier is not limited to a physical medium. The instructions' carrier may be a further arrangement of data, namely, a communications link; however, it appears to be functional data, inasmuch as the data of the data carrier carries other data (the instructions). Functional data alone is not statutory because it is none of a useful process, machine, manufacture, nor composition of matter. The claimed carrier broadly includes the communications link. Being

only a structure of data, without physical structure, it is none of a useful process, machine, manufacture, nor composition of matter.

All claim limitations have been considered, and the claimed carrier carrying instructions has been found nonstatutory as a mere arrangement of data. The claim does not recite any structural medium, and it does not recite any data structurally and functionally interrelated to a statutory class of subject matter. A claim for statutory subject matter could be one in which computer-readable medium is the matter of the claim; however, it is not clear a medium can be identified in the disclosure as filed.

Claim Rejections - 35 USC § 103

Larkey and Nitta

22. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Larkey [US Patent 5,127,055] in view of Nitta [US Patent 5,255,342], both already of record.

In the paragraphs that follow, note that the alternative claim limitations that are met by the references are NOT enclosed in parentheses. The particular location within the reference and terminology of the reference that meet the claim limitation are enclosed in brackets []. Alternative limitations of the claims are enclosed in parenthesis (); those limitations within parentheses were considered, but a different alternative setting forth the claim was met by the reference citations.

23. Regarding claim 20, Larkey [at title] describes a method for recognizing speech by describing the content and functionality of the recited limitations recognizable as a whole to one versed in the art as the following terminology:

possible pronunciation rules [at column 1, lines 54-56, as patterns which characterize a manner of pronouncing];

an APR [at column 6, lines 36-51, as a list of candidates and alternates of selected reference patterns];

determining (or generating) the APR in accordance with a current pronunciation (or accent) of a current speaker [at column 5, lines 60-65, as place in the recognition event record the best candidate and alternates for each utterance of the speaker];

(a CL or) a dictionary of variants is employed for recognition [at column 4, lines 14-30, as the reference patterns that may be variants corresponding to a same word or phrase is operated in accordance with speech recognition];

adapting the (CL or) dictionary by applying the APR to it [at column 8, lines 58-59, as effect reference pattern adaptation using the content of the recognition event record];

the dictionary is adapted to the current speaker [at column 13, lines 52-64, as the reference patterns are updated based upon the speaker in speech context];

thereby including speaker specific variants to the current CL [at column 13, lines 52-54, as update the reference patterns to provide representations of words to be recognized];

the variants are pronunciation variants [at column 13, lines 54-64, as the reference patterns represent the same words differently pronounced].

Larkey [at column 1, lines 54-67] describes a plurality of those patterns, that is, stored reference patterns that characterize a manner of pronouncing. However, Larkey does not explicitly show that the stored set of rules provide a PS, in which the APR is determined.

Nitta [at column 1] describes aspects of conventional speech recognition, including much of the conventional method of Larkey -- the stored set of reference patterns, features extraction, matching. Nitta also describes a conventional subspace method for recognition, including:

a PS of the rules (or sets) [at column 1, lines 52-60, as a subspace of the dictionaries of reference patterns orthogonalized on orthogonal axes];

determining an APR in the PS [at column 1, lines 59-60, as create categories of the dictionaries].

As indicated, Nitta shows that a PS was known to artisans at the time of invention. Nitta [at column 2, lines 3-6] also points out that using the PS has the advantage of easily obtaining a

recognition result. To the extent that Larkey does not necessarily describe a PS by describing a set of reference patterns, it would have been obvious to one of ordinary skill in the art of speech recognition at the time of invention to include the conventional concepts described by Nitta at least PS of the rules, categories of candidates, and categories of alternates in the subspace method because then Larkey's pattern matching could easily obtaining a recognition result, for example of the potential candidates and alternates.

Nitta also describes and makes obvious:

a computer readable carrier including computer program instructions that cause a computer to implement method for recognizing speech [at column 3, lines 8-9, as a computer comprising steps of pattern recognition method performed by a computer].

Allowable Subject Matter

24. Claims 1-19 would be allowable in view of the prior art of record if rewritten to overcome any objections or rejections under 35 U.S.C. 112, especially as appearing in this Office action.

Response to Arguments

25. The prior Office action, mailed October 4, 2005, objects to the claims and rejects claims under 35 USC § 112 and § 101. The Applicant's arguments and changes in SUPPLEMENTAL AMENDMENT, filed January 30, 2006, have been fully considered with the following results.

26. Objections to the claims are maintained. Please see new grounds of objection.

27. With respect to rejection of claim 20 under 35 USC § 112 as being indefinite, the changes entered by amendment provide sufficiently definite descriptions of the claimed subject matter. Accordingly, the rejection is removed.

28. With respect to rejection of claim 20 under 35 USC § 101, the rejection is maintained.
Please see new grounds of rejection.

Conclusion

29. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

30. Any response to this action should be mailed to:

Mail Stop AF

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

or faxed to:


(571) 273-8300, (please mark "EXPEDITED PROCEDURE"; for formal communications and for informal or draft communications, additionally marked "PROPOSED" or "DRAFT")

Patent Correspondence delivered by hand or delivery services, other than the USPS, should be addressed as follows and brought to U.S. Patent and Trademark Office, Customer Service Window, **Mail Stop AF**, Randolph Building, 401 Dulany Street, Alexandria, VA 22314

31. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald L. Storm, of Art Unit 2654, whose telephone number is (571) 272-7614. The examiner can normally be reached on weekdays between 7:00 AM and 3:30 PM Eastern Time. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (571) 272-7602.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Inquiries regarding the status of submissions relating to an application or questions on the Private PAIR system should be directed to the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 571-272-4100 between the hours of 6 a.m. and midnight Monday through Friday EST, or by e-mail at: ebc@uspto.gov. For general information about the PAIR system, see <http://pair-direct.uspto.gov>.

February 8, 2006


Donald L. Storm
Examiner, Art Unit 2654